1. A set where every non empty subset has a smallest element- guarantees that there exists a smallest number in any nonempty set of natural numbers.

Answer: Well ordered set

2. Let P(n) be a statement about the natural numbers n.
If the following two conditions hold, then P(n) is true for all n e N.
1) P(K) is true.
2) If P(K) is true then P(K + 1) is true.

Answer: Proof by induction

3. Fn + Fn+1 = Fn+2

Answer: Fibonacci numbers

4. Let a and b be 2 nonzero integers. we say b divides a and write b|a if there is an integer q such that a=bq

Answer: Definition of divides

5. If a|b and b|c then...

Answer: a|c

6. Let a and b be integers not both 0. The _____ of a and b is the largest positive integer d such that d | a and d | b. d= gcd (a,b).

Answer: Greatest Common Divisor

7. Let a and b be integers not both 0. Then (a,b) is the smallest positive integer, d, that can be expressed as ax + by =d, where x and y are integers.

Answer: Euclidean Algorithm

8. We say a and b are _____ if (a,b) = 1.

Answer: relatively prime

9. If d = (a, b) then...

Answer: 1 = (a/d, b/d)

10. Given two integers, not both 0, the _____ is the smallest positive integer that is a multiple of both given integers. [a,b]

Answer: Least Common Multiple

11. (x0 + b/dt, y0 - a/d t)